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Examining the Relationship Between Family Leisure and Physical Activity in Seventh and Eighth Grade Students

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EXAMINING THE RELATIONSHIP BETWEEN FAMILY LEISURE AND
PHYSICAL ACTIVITY IN SEVENTH AND EIGHTH GRADE STUDENTS

A Thesis
Presented to
The Faculty of the Department of Physical Education and Recreation
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Master of Science

By
Trinity Jade Edwards

August 2007

EXAMINING THE RELATIONSHIP BETWEEN FAMILY LEISURE AND
PHYSICAL ACTIVITY IN SEVENTH AND EIGHTH GRADE STUDENTS

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EXAMINING THE RELATIONSHIP BETWEEN FAMILY LEISURE AND PHYSICAL ACTIVITY IN SEVENTH AND EIGHTH GRADE STUDENTS

Trinity Jade Edwards

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(70)

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This study examined the relationship between family leisure and physical activity in seventh and eighth grade students. The sample was self-selected from a population of students from a Midwest junior high school (N=526). Data were collected through a survey instrument sent home with students via their homeroom teacher. The instrument was accompanied by: (a) minor assent form, (b) parental informed consent form, and (c) survey instrument for the parent respondents including relevant demographic questions. The survey instrument comprised the Family Leisure Activity Profile (Zabriskie, 2000), Satisfaction with Family Life Scale, and six physical activity questions. The physical activity questions were from the Center for Disease Control and Prevention Youth Risk Behavior Survey (Center for Disease Control, 2006b).

Pearson product-moment correlations were used to examine the relationships between the research variables. Findings from the data indicated a positive relationship between family leisure and physical activity in adolescents. Findings also indicated significant relationships between youth satisfaction with family life and both family leisure and physical activity.

Chapter 1

INTRODUCTION

The recreation and leisure service field has its roots in civil service and public health. Recreation began to develop as a profession in the United States during the Industrial Revolution as factory workers living in substandard conditions needed an outlet for leisure activities (Smith, Austin, Kennedy, Lee, & Hutchison, 2005). Today, public recreation facilities still serve the public by providing inexpensive leisure opportunities for all Americans without respect to age, income level, or ability (Vinluan, 2005). These public facilities also offer the chance for Americans to increase their daily amounts of physical activity. Increasing physical activity has become a priority as the nation is confronted with an obesity crisis that threatens public health and the economy (Vinluan, 2005). Unfortunately, the obesity crisis has been passed down to the youth of the nation as results from the 1999-2002 National Health and Nutrition Examination Survey indicated 16% of children and adolescents ages 6-19 are overweight, which represents a 45% increase from the previous estimates of 11% in 1994 (Center for Disease Control and Prevention, 2006a).

Children are the future leaders of the country which is a primary reason their health and development has become such a prevalent societal issue. America's Promise-The Alliance for Youth stated several factors have raised awareness of the importance of a healthy start for children, including upsurges in childhood obesity and diabetes (America's Promise, 2007). Physical activity is considered a viable solution for obesity prevention and intervention. Researchers reported an inverse positive relationship between an increase in physical activity and a decrease in Body Mass Index during

adolescence (Berkey, Rockett, Gillman, & Colditz, 2003; Kimm et al., 2005). Body Mass Index, or BMI, is the practical measure used to determine obesity (Center for Disease Control and Prevention, 2007).

Providing opportunities for increased daily amounts of physical activity for children is a method by which recreation and leisure service professionals can aid in creating a healthier youth population. Vinluan (2005) suggested children's participation in physical activity occurs most outside of the school setting. Leisure service providers serve many children during their non-school hours at local recreation facilities and through involvement in community sports programs. Focusing on the family by providing family leisure opportunities is a way the recreation and leisure service industry might help create healthier youth. Orthner (1998) stated, "Recreation professionals are advised to act as surrogate parents, but no recommendation is made to involve families themselves in shared activities - a clear oversight" (p. 91).

A better understanding of the relationship between family leisure and physical activity is an important step in making programming and service recommendations to recreation and leisure professionals. Therefore, the purpose of this research was to examine the relationship between family leisure activities and physical activities in adolescents.

Purpose of the Study

The purpose of the study was to examine the relationship between family leisure and physical activity in seventh and eighth grade students.

Significance of the Study

Family leisure has received additional focus among leisure research in recent years. Defining the term “family leisure” has challenged researchers as previous definitions of leisure behaviors focused primarily on the individual (Shaw, 1997). The efforts to define the term, and related challenges, advanced the understanding of family leisure. Changes in the definition of the traditional American family also affected family leisure research throughout the past two decades (Mancini & Orthner, 1988; Kelly, 1997). Previous family leisure research focused mainly on married couples without children, but recently work by Zabriskie and McCormick (2003); Shaw and Dawson (2001); and Larson, Gillman, and Richards (1997) examined leisure from different perspectives within the family.

Another challenging issue faced by researchers is measuring the family leisure construct and interpreting the results. Zabriskie (2000) developed a measuring tool for family leisure patterns called the Family Leisure Activity Profile (FLAP), which is based on the Core and Balance Model of Family Leisure Functioning. The FLAP is recognized as a reliable instrument to measure family leisure activity patterns (Zabriskie, 2000; Zabriskie & McCormick, 2001).

Apparently, no previous studies specifically examined the relationship between family leisure and physical activity. Carter, McGee, Taylor, and Williams (2007) suggested connectedness with family was associated with increased reports of physical activity in adolescents. Trost et al. (2003) stated, “Parental support was an important correlate of youth physical activity, acting directly or indirectly through its influence on self-efficacy” (p. 277). Findings such as these lead to the question of whether or not a

relationship exists between family leisure and physical activity, and if so, to what degree?

Further research on this relationship will enhance the body of knowledge related to family leisure and physical activity.

Delimitations

The scope of the study was delimited to the following:

1. Male and female seventh and eighth grade students at a local junior high school.
2. The data gathered from the survey packets during the data collection period.
3. Family leisure as measured by the Family Leisure Activity Profile (FLAP).
4. Satisfaction with family life as measured by the Satisfaction With Family Life Scale (SWFL).
5. The use of physical activity and inactivity questions from the Youth Risk Behavior Survey to gather physical activity information from 12-14 year olds.

Limitations

The results from this study were interpreted considering the following limitations:

1. Willingness of parents or legal guardians to allow their children to participate in the study.
2. The ability of participants to understand and respond to the survey items.
3. Accuracy in the answers given on the survey instrument.
4. The geographic area in which the study took place.
5. The manner of survey administration.
6. The reliability and validity of the survey instrument.

Assumptions

The following assumptions were made by the researcher:

1. Subjects took the packets home, completed all enclosed documents with permission of parent or guardian, and returned completed surveys and consent documents in the envelope provided.
2. Subjects answered each question on the survey honestly and independently.
3. Subjects followed the instructions carefully and answered each item on the survey.
4. Subjects decided whether or not to participate in the study before turning in packets to the researcher.

Definition of Terms

The following terms are defined to clarify their use in the study:

Family Leisure. This term primarily refers to time parents and children spend together in leisure or recreational activities (Shaw, 1997).

Core and Balance Model of Family Leisure Functioning. This model indicates there are two interrelated patterns of family leisure (core and balance) which families use to satisfy their need for both stability and change (Zabriskie & McCormick, 2001).

Core Leisure Activities. These activities are common, everyday, low-cost, relatively accessible, and often home-based activities many families do frequently (Zabriskie & McCormick, 2001).

Balance Leisure Activities. The activities often require substantial planning and are less spontaneous and more formalized. These activities usually occur less frequently than core activities, but are of a longer duration (Zabriskie & McCormick, 2001).

Family Leisure Activity Profile (FLAP). A 16-item survey measuring involvement in family leisure activity based on the Core and Balance Model of Family Leisure Functioning (Zabriskie & McCormick, 2003).

Youth Risk Behavior Survey (YRBS). A school-based survey administered by state and local education and health agencies as part of the Center for Disease Control and Prevention Youth Risk Behavior Surveillance System. The YRBS monitors six categories of priority health-risk behaviors among youth including: tobacco use, alcohol and drug use, sexual behaviors that contribute to unintentional pregnancies or sexually transmitted diseases, unhealthy dietary behaviors, and physical inactivity (Center for Disease Control and Prevention, 2006b).

Physical Activity. Any activity one participates in that involves bodily movement. Examples include: (a) walking, (b) running, (c) yard work, (d) cycling, (e) swimming, and (f) recreational or team sports.

Body Mass Index (BMI). The practical measure used to determine overweight; is a measure of weight in relation to height (Center for Disease Control and Prevention, 2007)

Obesity. A label for ranges of weight greater than what is generally considered healthy for a given height. The term also identified ranges of weight shown to increase the likelihood of certain diseases and other health problems. (Center for Disease Control and Prevention, 2007)

Chapter 2

REVIEW OF LITERATURE

The purpose of the study was to examine the relationship between family leisure and physical activity in seventh and eighth grade students. This chapter provides a review of relevant literature related to family leisure, physical activity, and other issues relative to this study including America's Five Promises. For purposes of clarification and organization, the chapter is arranged according to the following subheadings: (a) America's Five Promises, (b) Family Leisure, and (c) Physical Activity.

America's Five Promises

Since its founding in 1997, America's Promise-The Alliance for Youth has identified and promoted five promises or vision statements to aid in developing America's youth population into responsible and productive citizens. The promises include: 1) Caring Adults, 2) Safe Places and Constructive Use of Time, 3) A Healthy Start and Healthy Development, 4) Effective Education for Marketable Skills and Lifelong Learning, and 5) Opportunities to Make a Difference through Helping Others (Scales & Benson, 2006). While it may be argued that participation in family leisure activities can contribute to more children experiencing each of these five promises, promise number three was chosen as the ultimate framework for this research.

According to America's Promise (2007), several factors have raised awareness of the importance of a healthy start including upsurges in childhood obesity and diabetes. Results from the 1999-2002 National Health and Nutrition Examination Survey (NHANES) stated an estimated 16% of children and adolescents ages 6 through 19 are overweight, which represents a 45% increase from the previous estimates of 11% (Center

for Disease Control and Prevention, 2006a). Overweight children and adolescents are more likely than other children and adolescents to have risk factors associated with cardiovascular disease such as high blood pressure, high cholesterol, and Type 2 diabetes (Center for Disease Control and Prevention, 2007). The philosophy behind the promise is every child deserves healthy bodies, healthy minds, and healthful habits resulting from regular healthcare, good nutrition and exercise, and positive role models for physical and psychological health (America's Promise, 2007).

Understanding the relationship between family leisure and physical activity among adolescents could mark an important step in adhering to this philosophy, especially since many of the Promises are not fulfilled for many of the nation's youth. Ten million children out of the 47 million in the United States ages 6 to 17 are not even partially experiencing the Promises (Scales & Benson, 2006). The National Promises Study revealed only 43% of young people are actually experiencing the Healthy Start and Healthy Development Promise, and only one third of teens and one in four younger children have the critical components of good healthcare, which includes annual visits to the dentist and doctor and health insurance coverage (America's Promise, 2007).

The data for the National Promises Study was collected through a series of national polls designed by Search Institute and Child Trends and conducted by the Gallup Organization (Scales and Benson, 2006). The surveys were conducted over the phone and each Promise was measured using key indicators and outcomes. The key indicators for promise three included: regular checkups and health insurance, good nutrition, daily physical activity, recommended amount of restful sleep, health education classes, positive adult role models, peer influence, and emotional safety (America's Promise, 2007).

Family Leisure

This section focuses on family leisure research related to this study beginning with a brief, yet comprehensive review of the history. This section also focuses on particular challenges family leisure researchers face, including the difficult task of defining the family leisure concept and measuring family leisure patterns. Previous family leisure research is extremely important to this study because of the insights and theoretical frameworks offered to aid in measuring and interpreting results.

Brief History of Family Leisure Research

Family leisure research has changed greatly over the past few decades. According to Kelly (1997), a “period of neglect” (p. 132) occurred in the sixties and seventies. Family leisure garnered little attention until late in the period when household-based research placed leisure in a fuller social context (Kelly, 1997). Carisse (1975) wrote an article positing family and leisure as contradictory:

Leisure is too easily thought of as a re-enforcer of family cohesion. On the contrary: it may very well be an arena for conflict because of the very nature of leisure activity which connotes pleasure, freedom, and self-expression which are in contradiction to some forms of authority patterns and control of behavior by the family group. (p. 194)

Orthner (1975) recognized family life professionals had given little attention to the family leisure factor due in part to the lack of research in the area. Orthner’s sentiments posed the questions, “Is leisure really an important consideration for the family and why; should leisure reinforcement be a function of family life specialists, and if so, what should the principle concerns be in this area?” (p. 175).

The individual remained the unit for leisure analysis into the early eighties as social psychological models became the framework for research. The leisure-family

connection was taken for granted as the idea became standard that family and leisure were good for each other (Kelly, 1997). Neulinger (1980) acknowledged three popular definitions of leisure: (a) leisure as a period of time, (b) leisure as an activity, and (c) leisure as a state of mind. The definition of leisure as a period of time, synonymous with free time, has been identified as the most prevalent (Neulinger, 1980). Leisure as a state of mind requires having no specific goal or purpose and requiring perceived freedom and intrinsic motivation (Neulinger, 1981). In the late nineties, researchers challenged such definitions as families often did not meet these criteria (Shaw, 1997). Shaw (1997) asked:

Does the term family leisure imply not only that all family members are involved in the same activity, but also that they all experience the situation subjectively as leisure? That is, does it suggest that family leisure activities are mutually enjoyable, valued and satisfying? (p. 99)

To better define leisure in the family context, researchers examined family leisure activities from different perspectives within the family (Larson, Gillman, & Richards, 1997; Zabriskie & McCormick, 2003; and Shaw & Dawson, 2001) and within conflicting social paradigms (Shaw, 1997).

Changes in the definition of the traditional American family affected family leisure research throughout the past two decades (Mancini & Orthner, 1988; Kelly, 1997). The issues requiring redefinition of a typical family include the more common heterosexual couple (in a committed relationship) without marriage or children, the emergence of homosexual couples with children, and the growth of the single-adult household, with and without children (Kelly, 1997). Due to these and several other issues, the next portion of this review is dedicated to studies focused on defining and measuring the family leisure component.

Defining Family Leisure

Family leisure, as used in the North American context, refers to the time parents and children spend together in recreational activities (Shaw, 1997). This definition had sufficed for the purpose of simply defining the term, but as the scope of family leisure research broadens into the future, researchers must have at their disposal reliable tools to measure and identify the family leisure construct. “Researchers interested in the family as a context for leisure experiences and activities are faced with the difficult and controversial question of how to conceptualize family leisure in terms of factors such as experience, motivation and outcomes” (Shaw, 1997, p. 98). Historically, the state of leisure has been defined by these three factors (e.g. experience, motivation, and outcomes) within the context of the individual. However, the question remains as to whether these factors are appropriate for use in defining leisure at the family level? Family activities may not always be an enjoyable experience with positive outcomes, chosen freely, or intrinsically motivated, and therefore current social psychological definitions of leisure may not always apply to the family (Shaw & Dawson, 2001).

Leisure from Different Family Perspectives

Shaw (1997) noted challenges posed to family leisure research stem from two broad theoretical paradigms employed by researchers: (a) the social-psychological paradigm and (b) the sociological-feminist paradigm. Research within the social-psychological paradigm is based on equally shared power between mothers and fathers, even though specific roles for each are not expected to be the same (Shaw). According to Shaw, applying this assumption of equity means family activities are not expected to be oppressive, however differences between male and female experiences are not generally

explored. Researchers following the sociological-feminist paradigm do not assume family leisure is always a positive experience, nor do they believe the workload is equally shared among partners in the relationship as many times women assume the role as planner and facilitator of family leisure (Shaw).

To further challenge current social psychological definitions of leisure, Shaw and Dawson (2001) interviewed 30 mothers and 23 fathers of preteen children about “their family leisure activities, experiences, attitudes, and beliefs about family participation” (p. 217). Families with children in the 10-12 year age range were recruited to participate in the study. Researchers believed these families were at the pinnacle of family leisure participation because the social lives of children in this age range do not dominate over family activities (Shaw & Dawson). Findings indicated both parents placed high value on family leisure experiences, and the reasons family leisure was deemed so important fell into two main themes: (a) improved family functioning including sub themes of family interaction, communication, bonding, and cohesion; and (b) parents’ perceptions of the benefits of family leisure for children including learning positive values and developing healthy lifestyles (Shaw & Dawson). While this research led to closer examination of the family leisure experience from the parent perspective, little attention has been given to the perceptions of children. “Almost no data exist on the attitudes and reactions of children to family activities, nor of the outcomes, beneficial or otherwise, for these family members” (Shaw, 1997, p. 109).

Larson, Gillman, and Richards (1997) examined different experiences of family leisure for fathers, mothers, and adolescents. Larson, Gillman, and Richards based their research on the assumption family leisure activities would be associated with differing

experiences between mothers and fathers and between parents and adolescents. The sample consisted of two-parent families, and in each family the mother, father, and one child took part by carrying pagers and self-report forms for one week (Larson, Gillman, & Richards). Participants were instructed to carry the materials at all times during waking hours and fill out one activity report form each time the pager signaled. Their experiences were measured against traditional definitions of leisure: (a) perceived freedom, (b) intrinsic motivation, and (c) positive affect. According to Larson, Gillman, and Richards, there were “significant differences in family members’ experience of family and home leisure for intrinsic motivation and affect but not for the experience of perceived freedom” (p. 85). Interestingly, mothers reported significantly less positive affect than fathers and young adolescents reported less intrinsic motivation and affect than their parents (Larson, Gillman, & Richards).

Zabriskie and McCormick (2003) stated, “Although studies are beginning to utilize family variables, they still rely primarily on data collected from adult parents only” (p. 165). Zabriskie and McCormick (2003) studied family leisure involvement and satisfaction with family life at the parent, child, and family level using the Core and Balance Model of Family Leisure functioning (Zabriskie, 2000).

The Core and Balance Model of Family Leisure Functioning suggests that there are two interrelated categories or patterns of family leisure, core and balance, which families utilize to meet the needs of stability and novelty. These two patterns can be identified by examining the nature of leisure activities engaged in by the families as well as the context in which they occur. (Zabriskie, 2000, p. 34-35)

Zabriskie and McCormick (2003) found “family leisure activity appeared to be more strongly related to family satisfaction for parents than it was for their children” (p. 180).

Core leisure patterns showed a significant positive relationship with the youth's perception of family satisfaction (Zabriskie & McCormick, 2003).

Measuring the Family Leisure Construct: The Family Leisure Activity Profile

Defining the concept of family leisure is one of the many challenges faced by researchers. Another equally challenging issue faced by researchers is measuring the family leisure construct and interpreting the results. Although family leisure research has developed over the past few decades, reviewing the literature clearly shows a need for theoretically based research (Zabriskie, 2000; Shaw, 1997; Siegenthaler & O'Dell, 1998; Freysinger, 1997). Zabriskie (2000) developed a measuring tool for family leisure patterns called the Family Leisure Activity Profile (FLAP). Zabriskie and McCormick (2003) stated:

The FLAP measures involvement in family leisure activity patterns based on the Core and Balance Model of Family Leisure Functioning. Respondents identify leisure activities done with family members across 16 activity categories. Eight categories of activities are representative of core family leisure patterns (e.g., family dinners, home-based TV/videos, games, and yard activities) and eight categories are representative of balance family leisure patterns (e.g., community-based events, outdoor activities, water-based activities, adventure activities, and tourism).
(p. 172)

The Core and Balance Model of Family Leisure Functioning combines two cited notions of leisure behavior patterns. Kelly (as cited in Zabriskie, 2000; Zabriskie & McCormick, 2001; Zabriskie & McCormick, 2003) presented the idea of the two distinct leisure patterns, focusing specifically on the types of activities being pursued and thereby “addressing the idea of continuity and change in leisure through the life course” (Zabriskie, 2000, p. 33). The ideas of continuity, or stability, and change were further expounded upon by Iso-Ahola (1980):

The examination of social leisure behavior should be launched from the *dialectical* standpoint – from the premise the human beings are continuously changing. This is not to deny the stability of behavior. For example, it has been shown (e.g. McCall, 1974) that both infants and adults intentionally seek novelty, complexity and incongruity (i.e. change), but only to the extent that their social and physical environment is psychologically stable, structured, and secure. This, however, does not mean that stability is more important than change. (p. 20-21)

The FLAP illustrates the combination of these two ideas and the Core and Balance Model. The model indicates there are two interrelated patterns of family leisure (core and balance) which families use to satisfy their need for both stability and change (Zabriskie & McCormick, 2001). The FLAP instrument directs subjects to answer questions regarding activities from both leisure patterns. Activities in each category can range according to each family, but for the most part activities in the core pattern are low-cost, common, relatively accessible, and often home-based while activities in the balance category include ones that are less common, sometimes spontaneous, and out of the ordinary (Zabriskie, 2000; Zabriskie & McCormick, 2001; Zabriskie & McCormick 2003). Zabriskie and McCormick (2001) explained the construction of each item on the FLAP:

Each question root asks if the respondent participates in the activity category with family members. Specific activity examples are included to help clarify and delineate between categories. If the answer is “yes,” respondents are asked to complete ordinal scales of estimated frequency (“about how often?”) and duration (“for about how long each time?”) that follow each root. (p. 285)

Zabriskie and McCormick (2001) tested the Core and Balance Model of Family Leisure Functioning by theorizing relationships between family leisure patterns and family functioning. More accurately, they hypothesized that core leisure patterns address the family’s need for stability while balance activities address the need for change. They

also hypothesized that families have a need for both patterns for optimal functioning and therefore “the interaction between core and balance would be related to family cohesion and adaptability” (Zabriskie & McCormick, 2001, p. 284). Zabriskie and McCormick (2001) administered the FLAP and a 30-item Family Adaptability and Cohesion Scale to three undergraduate classes at a university. Although a preliminary study offered only one perspective from within the family unit, Zabriskie and McCormick (2001) found both core and balance patterns were significantly related to family cohesion and adaptability, and their findings “provide preliminary evidence supporting the use of the Core and Balance Model of Family Leisure Functioning in examining the nature of the family leisure relationship” (p. 287).

Zabriskie and Freeman (2004) used the FLAP to examine family leisure behavior among families with transracial adoptive children to make comparisons to a large sample of families with biological children. Data were collected from one child and the parent with the next upcoming birthday, and data were analyzed from the youth, parent, and family perspectives (Zabriskie & Freeman). Zabriskie and Freeman reported higher scores for adoptive families in core, balance, and total leisure involvement from the parent, youth, and family level perspectives. Their findings provided further empirical evidence to support the FLAP as a measure of family leisure involvement. Zabriskie and Freeman also found a positive relationship between family leisure and family functioning among the sample.

Smith (2005) examined family communication within the Core and Balance Model of Family Leisure Functioning. The FLAP was used to measure family leisure involvement, and the Family Communication Scale (FCS) was the measure of family

communication (Smith). Similar to previous studies using the FLAP (Zabrisie, 2000; Zabriskie & McCormick, 2003; Zabriskie & Freeman, 2004), data were analyzed from the youth, parent, and family perspectives. Smith reported family leisure involvement was related to family communication from the youth and family perspective, but not from the parent perspective. Smith also stated, “youth and family sample means were found to be similar to past samples using similar instrumentation” (p. 20).

Physical Activity

The youth population of this country is faced with an obesity epidemic detrimental to their health and development, and various government agencies and initiatives, such as America’s Promise, are striving to assist in helping the nation’s youth become healthy and productive citizens. Vinluan (2005) stated that federal policymakers have only begun to develop strategies to combat obesity and promote general wellness. Vinluan’s strategies fall into three categories: (a) public education campaigns targeted at individual behavior change, (b) treatment of obesity-related diseases, and (c) developing community-based active living incentives. Participating in regular physical activity has been found to decrease Body Mass Index (BMI) and contribute to children and adolescents living happier and healthier lives (Berkey, Rockett, Gillman, & Colditz, 2003; Kimm et al., 2005). This section focuses on the relationship between physical activity and BMI and the relationship between parental habits and their children’s subsequent leisure and physical activity patterns.

Physical Activity and BMI

Kimm et al. (2005) explored the relationship between changes in habitual physical activity and changes in BMI and adiposity during adolescence while comparing the

changes between subjects who remained active and those who did not. Although the subject group was separated by race, this study is cited primarily for the information pertaining to the relationship between physical activity and BMI.

Kimm et al. (2005) conducted a multi-centre longitudinal study of 1,152 African-American and 1,135 Caucasian girls. The participants in the study were from the United States and were followed for nine years (from ages 9 to 18 or 10 to 19). Each girl completed a Habitual Activity Questionnaire (HAQ) for the researchers to assess extracurricular sports or other physical activities in which the girls had participated in the past year. The HAQ's were administered a total of seven times throughout the study and were reviewed with each participant in order to ensure accuracy. Other information related to energy intake, menstrual periods, childbirth, and smoking was gathered throughout the study. According to Kimm et al.:

The initial model for the whole cohort included race, year 1 HAQ score, year 1 energy intake, age at menarche, childbirth, study year, cigarette smoking, change in HAQ score, change in energy intake and the interaction term between race and change in HAQ score. (p. 302)

Data were collected from 1987 to 1997 with a follow-up rate of 89 % (Kimm et al., 2005). The results from the data showed a significant relationship between physical activity and changes in BMI over the nine years of the study, as the cohort experienced a pronounced decline in activity while the rate of obesity doubled without a largely reported change in energy intake (Kimm et al.). Moreover, Kimm et al. found the difference in BMI between active and inactive girls at ages nine and ten widened almost three times during the next nine years. These results provide empirical evidence that physical activity plays an important role in maintaining a healthy weight, and participating in modest amounts of physical activity during adolescence could be a

primary prevention tool for obesity. Kimm et al. also asserted the dramatic decrease in physical activity throughout adolescence among the sample calls for programs to prevent this decline.

Berkey, Rockett, Gillman, and Colditz (2003) also examined the relationship between BMI and physical activity in adolescents. They used BMI as the measure for obesity and administered a survey to young girls and boys who had previously been involved in the longitudinal Growing Up Today Study (Berkey et al.). The survey instrument included questions about the typical number of hours per week in which the children participated in 17 season-specific physical activities outside of gym class. The survey was first administered in the fall of 1997 and again one year later to assess changes in physical activity during that year. Taking the normal increase of BMI into account, due to growth during adolescence, the results from the survey indicate that overweight girls and boys who increased recreational physical activity experienced a relative decline in BMI (Berkey et al.). Furthermore, Berkey et al. found that increased inactivity during recreational and leisure time was associated with larger BMI gains in girls.

Relationships between Parent and Child Physical Activity

While no known studies have been conducted to date that specifically examine the relationship between family leisure and physical activity in adolescents, several studies have looked at comparable relationships. For instance, Carter, McGee, Taylor, and Williams (2005) examined “associations between connectedness to family and friends, and school engagement, and selected health compromising and health promoting behaviors in a sample of New Zealand adolescents” (p. 51). According to Carter et al.,

health compromising behaviors include cigarette smoking, alcohol and drug use, risky dieting methods, early sexual activity and physical aggression. Health promoting behaviors include being physically active, eating well, using sun protection, and using safe sexual practices.

Carter et al. (2005) modified the Youth Risk Behavior Survey (YRBS) developed by the Center for Disease Control and Prevention to understand the adolescents' health compromising and promoting behaviors. Carter et al. also added questions to the modified YRBS in order to gain information related to family, friends, and school engagement. The relationship between the health promoting behaviors and connectedness with family was the most important relationship regarding this study. Carter et al. reported, "A high level of connectedness to family was associated with increased reports of physical activity and cycle helmet usage" (p. 57). While this result in no way suggests a relationship between family leisure and increased physical activity in adolescents, it does support the idea that closeness with one's family does promote positive behaviors, including increased physical activity.

Crossman, Sullivan, and Benin (2006) focused more closely on the issue of obesity rather than on positive health behaviors. They looked at the family environment and the risk of obesity for American adolescents as young adults using data from the National Longitudinal Study of Adolescent Health. "This study focuses on one potential obesogenic environment, the family. To test the hypothesis that adolescents' family environment has long-term effects on their weight status, we use longitudinal data from a large representative sample of American adolescents" (Crossman et al., p. 2256). Findings from this study indicated being obese as an adolescent greatly increases the risk

of becoming an obese adult and having an obese parent increases the likelihood of being obese in young adulthood by about one and a half (Crossman et al.). Another important finding related to this research is “the more female adolescents feel that their parents care about them, the less likely they are to be overweight or obese as young adults” (Crossman et al., p. 2261).

Other related research looked more closely at the relationship between health habits of parents and the influence these habits have on their children. Anderssen, Wold, and Torsheim (2006) conducted a study to better understand the question of whether or not parental health habits are transmitted to their children. This study took place over an eight year period examining associations between self-reported leisure time physical activity changes of parents and the self-reported physical activity changes of their children. The sample consisted of a representative sample of 557 seventh graders and their parents, and was collected in 1990 following the children from age 13 to 21 (Anderssen et al.). The participants were surveyed at various intervals over the eight-year span; however, upon analysis of data only weak associations between parents’ physical activity changes and the physical activity changes of their offspring were found (Anderseen et al). Therefore, the findings did not support the idea that parental habits may influence the physical activity of their children.

Trost et al. (2003) also studied the relationship between parental physical activity orientations and parental support for physical activity on youth physical activity participation, but reached a slightly different conclusion than that of Anderssen, Wold, and Torsheim (2006). Trost et al. found: “Parental support was an important correlate of youth physical activity, acting directly or indirectly through its influence on self-efficacy”

(p. 277). Trost et al. assessed the parents' physical activity habits, enjoyment of physical activity, beliefs regarding the importance of physical activity, and support of their child's participation in physical activity through a survey questionnaire. The youth participants (grades 7-12, mean age=14) completed an inventory of their physical activity in the past seven days and a physical activity self-efficacy scale (Trost et al.). The data were analyzed using structural equation modeling and variable path analysis.

The differences in the conclusions from these two studies likely result from slightly different research questions and methods by which the data were collected and analyzed. Anderssen, Wold, and Torsheim (2006) explained the lack of association between parent and child physical activity patterns could have been due to "social influences not captured in this study such as parental encouragement and financial support" (p. 521). However, parental encouragement, or support, was a factor in the study conducted by Trost et al. (2003), which could be also an explanation for the differing results.

Chapter 3

METHODS

The purpose of the study was to examine the relationship between family leisure and physical activity in seventh and eighth grade students. The methods are organized as follows: (a) arrangements for conducting the study, (b) design of the study, (c) selection of subjects, (d) selection of survey instrument, (e) administration of the survey instrument, and (f) treatment of data.

Arrangements for Conducting the Survey

This study was conducted among seventh and eighth-graders (12-14 years of age) attending a Midwest junior high school during spring 2007. The purpose and objectives of the study were presented to the respective Board of Education, which governs the city school system, and the Human Subjects Review Board at Western Kentucky University to seek approval for administration of the survey instrument and to discuss the feasibility of the study. Approval was granted from the Board of Education contingent upon the researcher making all remaining arrangements and sharing findings with the school board. Approval was also granted from the Human Subjects Review Board for the study to be completed within one year's time from the approval date (see Appendix A).

Design of the Study

This research followed a quantitative research design. More specifically, the study was constructed as a descriptive non-experimental design, which provides a summary of existing behaviors among subjects (McMillan & Schumacher, 2006). A survey instrument was administered to participants in the form of a questionnaire. The

questionnaire was designed to gain insight from the children's perspective regarding their family leisure and physical activity.

Selection of Subjects

The sample was chosen based on the age of the subjects with regard to the purpose of the study and because of the convenience of conducting the research. The age range of the subjects (12-14 years) "suggested that they had reached the level of cognitive development that includes the abstract thinking process necessary for the completion of the survey instrument" (Zabriskie & McCormick, 2003, p. 169). The junior high school was chosen as the access point for subjects because it was a likely avenue for contacting a broad range of families that currently have children in the home and have various demographic backgrounds (Zabriskie & McCormick, 2003).

The entire population of seventh and eighth graders at the junior high school was invited to participate in this study. A total of 526 students were given survey instruments and consent documents in unsealed envelopes via their homeroom teachers. From that point forward, the sample was self-selected as the students had the choice of taking the materials home, having consent documents signed, and completing the survey instrument. If students decided to participate, they were instructed to bring all materials back to their homeroom teachers sealed in the envelope provided to ensure privacy.

Selection of the Survey Instrument

The survey instrument utilized in this study reflects two previous instruments, the Family Leisure Activity Profile (FLAP) and the YRBS (Youth Risk Behavior Survey). Based on the recommendation of Zabriskie, the researcher who developed the survey, the FLAP was used in its entirety, which also included a seven-item Satisfaction With Family

Life Scale (SWFL) (personal communication, November 6, 2006). The FLAP asks subjects to respond to questions about leisure activities done with family members across 16 activity categories. Eight categories are representative of core activities such as family dinners, television and video watching, games, and yard activities; and eight categories represent balance activities such as community-based events, outdoor activities, adventure activities, and tourism (Zabriskie, 2000; Zabriskie & McCormick, 2001; Zabriskie & McCormick, 2003).

The YRBS was developed by the United States Center for Disease Control and Prevention to monitor six categories of priority health-risk behaviors among youth including: (a) tobacco use, (b) alcohol and drug use, (c) sexual behaviors that contribute to unintentional pregnancies or sexually transmitted diseases, (d) unhealthy dietary behaviors, and (e) physical inactivity (Center for Disease Control and Prevention, 2006b). For the purpose of this research, only questions related to physical activity and inactivity were used on the survey instrument. These questions and the FLAP were chosen to examine the relationship between the subjects' physical activity and family leisure patterns. The FLAP has been identified as a reliable measure of family leisure patterns (Zabriskie, 2000; Zabriskie, McCormick, & Austin, 2001; Zabriskie & McCormick, 2001). Zabriskie and McCormick (2001) stated:

Further implications for this line of study include the possibility of using an instrument such as the FLAP for both diagnostic and prescriptive purposes. If the relationships theorized in this model continue to hold true, the FLAP could be used as a nonthreatening [*sic*] leisure activity questionnaire to provide valuable information about other aspects of family functioning. (p. 287-288)

Reliability

“Reliability refers to the consistency of measurement - the extent to which the results are similar over different forms of the same instrument or occasions of data collection” (McMillan & Schumacher, 2006, p. 183). The reliability of the survey instrument was an important aspect in determining the usefulness of the data because the results are directly related to the measure that is used; therefore, evidence of the reliability of the FLAP and YRBS is discussed in this section.

Family Leisure Activity Profile

Zabriskie (2000) conducted four pilot studies to understand the reliability of different aspects of the FLAP and SWFL. Pilot study number four was specifically conducted to provide test-retest evidence of the reliability of the FLAP. The sample consisted of students in three university health courses (Zabriskie, 2000; Zabriskie & McCormick, 2001). The FLAP was administered to students during the second week of classes and again five weeks later. “The core and balance family leisure activity pattern indices were calculated for time one and time two” (Zabriskie, 2000, p. 71). Zabriskie (2000) noted:

Overall the findings of this study provide evidence of test-retest reliability for the study instrument. Both the individual items and the core and balance indices of family leisure patterns appeared to measure constructs consistently over time. The Satisfaction With Family Life Scale (SWFL) appeared to be a consistent measure over time as well. Evidence of internal consistency was also found for this scale, adding further evidence of reliability. (p. 77)

Zabriskie (2000) found that results from the SWFL were consistent between administrations; however, the portion of the scale related to satisfaction with the amount of time spent with family members reported a standardized alpha

of .42 at time one and .64 at time two. The Cronbach alpha was used to measure internal consistency of the first five SWFL questions for this study. Cronbach's alpha is a general form of internal consistency and used often in survey research (McMillan & Schumacher, 2006). Cronbach's alpha for the five SWFL items used in this study was .86, which showed high internal reliability. This statistic will vary based on whether or not certain items are deleted from the SWFL, as shown in Table 1.

Table 1

Cronbach's Alpha Statistics for SWFL Questions

SWFL Statements	Corrected Item - Total Correlation	Cronbach's Alpha if Item Deleted
1. In most ways my family life is close to ideal.	.701	.819
2. The conditions of my family life are excellent.	.793	.795
3. I am satisfied with my family life.	.762	.811
4. So far I have gotten the important things I want in my family life.	.676	.828
5. If I could live my life over, I would change almost nothing.	.528	.883

Youth Risk Behavior Survey

Brener et al. (2002) measured the test-retest reliability of the YRBS questionnaire using the kappa statistic and prevalence rates. The questionnaire was given to a sample of students from 61 schools in 20 states. Students were given envelopes including two identical survey instruments. At Time 1, students completed one of the questionnaires subsequently sealing the envelope containing

the second questionnaire and signing their names over the seal. The envelopes with each individual's name were returned to that particular student at Time 2 to assess consistency in the survey measure. Brener et al. stated:

A kappa statistic, which provides a measure of agreement that corrects for what would be expected by chance, was computed for each of the 72 items. Prevalence rates for each risk behavior at Time 1 and Time 2 also were calculated. (p. 338)

Brener et al. (2002) reported that items related to tobacco and alcohol use and sexual behavior demonstrated significantly higher reliability between Time 1 and Time 2 than questions related to dietary behaviors and physical activity. The explanation for this discrepancy asserted that behaviors related to substance use and sexual activity are more “salient to adolescents, and therefore more reliably recalled, [*sic*] than behaviors related to nutrition, physical activity, and other health-related topics such as health care” (Brener et al., p. 341). Also, inconsistent responses were considered response errors when calculating kappa, so the values of kappa computed were considered to be conservative estimates (Brener et al.). Therefore, if a student answered they had not participated in any physical activity in the past seven days at Time 1 but answered yes to participating in physical activity at Time 2, the responses would be inconsistent yet accurate.

Due to the inconsistencies in reliability related to physical activity questions reported by Brener et al. (2002), Cronbach's alpha was used to determine internal consistency of the physical activity questions used in this study. The alpha statistic for the six physical activity questions was .622. Table 2 illustrates how the alpha would vary based on the deletion of specific items.

Table 2

Cronbach's Alpha Statistics for Physical Activity Questions

Physical Activity Questions	Corrected Item – Total Correlation	Cronbach's Alpha if Item Deleted
PA - 20 minutes ⁺	.623	.443
PA- 30 minutes ⁺⁺	.389	.566
PA - 60 minutes ⁺⁺⁺	.588	.456
# Hours/TV	.159	.638
# Hours/Computer	.040	.667
# Sports Teams	.346	.595

⁺On how many of the past 7 days did you exercise or participate in physical activity for at least 20 minutes that made you sweat or breathe hard?

⁺⁺On how many of the past 7 days did you participate in physical activity for at least 30 minutes that did not make you sweat or breathe hard?

⁺⁺⁺During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?

Validity

Validity, as defined by McMillan and Schumacher (2006), refers to whether the inferences based on the data collected are appropriate, meaningful, and useful. Evidence based on the internal structural validity of the instrument will be used to interpret findings. “This type of evidence is usually accumulated by having experts examine the content of the instrument and indicate the degree to which it measures predetermined criteria or objectives” (McMillan & Schumacher, p. 180).

To demonstrate validity of the FLAP, Zabriskie (2000) relied on an international panel of eight experts to examine each question. The experts were instructed to examine the items on the FLAP to first “determine if the overall domain of recreation and leisure activities was adequately represented” (Zabriskie, 2000, p. 66). They were then introduced to the core and balance leisure patterns and asked to group activities according to each pattern. According to Zabriskie (2000), the experts supported the content validity

of the instrument by agreeing the domains of recreation and leisure were well represented and activities were properly defined as core and balance family leisure activity patterns.

The validity of the YRBS was more challenging to ascertain as Brener et al. (2002) stated, “much work remains to be done in assessing the validity of self-report measures of all types of health risk behaviors” (p. 341). Brener et al. identified this issue as a challenge due to the lack of objective measures for behaviors of interest. “Future research should examine ways to encourage even more reliable and valid self-reports of health risk behaviors among adolescents” (Brener et al., p. 342). Finally, Brener et al. stated that the demonstration of reliability of the YRBS does not ensure the validity of the instrument.

Administration of the Survey Instrument

Data were collected from a sample of seventh and eighth grade students at a Midwest junior high school. Survey packets were distributed via homeroom teachers to the entire seventh and eighth grade student population (N=526 students). Each packet included: (a) a parental consent form, (b) a minor assent form, (c) a FLAP for youth participants with added YRBS physical activity questions, and (d) a FLAP for parents/guardians with added demographic information questions. As the survey packets were being distributed during the homeroom period, the researcher made an announcement over the school’s public announcement system providing directions and encouragement.

Students were asked to take the packets home and have their parents review the materials and sign the consent document. Students were also expected to sign the minor assent document, and both the student and one parent or guardian were asked to complete

the survey instruments. The FLAP for the parents was included in the packets to elicit demographic information, however, that is the only information utilized from the parent survey in this study. This particular study focused on the relationship between family leisure and physical activity from the student's perspective.

Subjects were encouraged to answer each item honestly and independently. An incentive of a gift card was offered to the class who had the highest percentage of returned survey packets. Every participant was made aware of the incentive before data collection began.

The data collection period lasted a total of nine school days, or almost two weeks, throughout which time students had the option of completing the survey and returning the packet to the homeroom teacher at any time up until the final survey pickup day. Halfway through the nine-day period, the researcher made a trip to the school to deliver reminder notes to the homeroom teacher's mailboxes. The notes reminded teachers to ask for any completed packets during homeroom and to keep returned packets until the collection due date.

Once the data collection period was completed, the returned packets were picked up from each individual seventh and eighth grade homeroom by the researcher. Confidentiality was kept as participants were asked to seal all documents in the envelope provided. The envelopes were opened by the researcher alone at which time all identification information was removed from the actual surveys. Upon completion of the data collection period, a total of 117 survey packets were returned resulting in an initial return rate of 22%.

Treatment of Data

Throughout data entry each survey packet was opened individually to check for signed consent/assent documents and completed survey instruments. Five packets were deemed unusable because they had missing components. Two contained only one consent document, and three contained only sparsely completed youth surveys. The remaining 112 cases were encoded and entered into SPSS 14.0 for Windows for analysis.

Individual cases were reviewed for data entry errors. Upon completion of data screening (see Chapter 4), Pearson product-moment correlations were calculated to measure the relationships between (a) core family leisure activity patterns, (b) balance family leisure activity patterns, (c) total family leisure activity patterns, (d) youth physical activity, and (e) youth satisfaction with family life.

Chapter 4

DATA ANALYSIS

The purpose of the study was to examine the relationship between family leisure and physical activity in seventh and eighth grade students. The analysis of the data was organized as follows: (a) data screening, (b) descriptive statistics, (c) basic relationship data, and (d) discussion of the findings.

Data Screening

Data were collected and treated as described in Chapter 3. Once all data were entered, each case was reviewed for entry errors. After initial screening of the data, 11 cases missing data from 8-68 variables were discovered; these 11 cases were removed due to incompleteness. Eighteen additional missing data points related to frequency and duration were discovered among the remaining 98 cases. Values for each activity are used to compute the subjects' leisure indices. These 18 data points, out of a possible 3,136, appeared to be of a random nature. The missing data were replaced with the mean calculated from the remaining data for that specific variable.

Z- scores were computed to help identify the location of each score in the distribution and to check for potential outliers for all FLAP, SWFL, and physical activity variables. The z-score is the most basic standard score, and according to McMillan and Schumacher (2006), "Standard scores are numbers that are transformed from raw scores to provide consistent information about the location of a score in a total distribution" (p. 483). Potential outliers were identified as having a z-score greater than 3.29 (Tabachnick & Fidell, 1996). A total of 40 potential outliers were discovered among the FLAP variables. However, upon closer inspection of each case, only a few seemed to have

unlikely responses. For instance, one participant claimed to participate in games with family members for “7-8 hours” each time, while another answered that he or she has dinners at home “at least annually.” These instances were noted, but no data was deleted until further in the data screening process. Six potential outliers were discovered within the SWFL; however, none of these were deleted at this point in screening. Some responses ended up as outliers due to the fact that most subjects answered they were satisfied with their family life, but these particular subjects felt differently about their own family life. No outliers were discovered in the physical activity variables.

Subjects’ core and balance family leisure indices were then computed and scanned for implausible composites. Zabriskie (2000) stated these implausible composites resulted from “conservative cut scores” (p. 84) established to address extreme FLAP composites. For example, activity categories in items 1-11 of the FLAP yielded a score of 36 each time subjects answered they participated in the activity with family members “at least daily” for “8-9 hours” each time; activity categories in items 12-16 that subjects participated in with family members “at least monthly” for “3 or more weeks” each time yielded a score of 64 (Zabriskie, 2000). Therefore, FLAP index scores of 36 and higher in items 1-11 and 64 and higher in items 12-16 were deemed implausible composites (Zabriskie, 2000). In considering the information discovered in the data screening process, including checking for implausible composites, three cases were deleted leaving 98 cases for further statistical analysis.

Descriptive Statistics

Sample Statistics

The population for this study was 526 seventh and eighth graders attending a local junior high school with ages in the range of 12-14 years. The entire population was 51.7% male and 48.3% female, and the ethnicity of the population was predominately white (see Table 3).

Table 3

Ethnicity of Student Population

<u>Ethnicity</u>	<u>n</u>	<u>%</u>
White, non Hispanic	350	66.5
Black, non Hispanic	117	22.2
Hispanic	40	7.6
Asian or Pacific Islander	15	2.9
Native American	1	0.2
Other	3	0.6
Total	526	100

The sample for this study was self-selected as students chose whether or not to participate. Originally, 117 survey packets were returned, resulting in a 22% response rate; however, only 101 cases were deemed appropriate for descriptive statistical analysis and 98 cases were used in correlation analysis. Participants in the sample were 12-14 years of age. Parents reported their own ethnicity and the gender and age of their child who was participating in the study in the demographic portion of the survey. The parents'

ethnicity and the age and gender of the children who participated in the study are summarized in Tables 4-6.

Table 4

Ethnicity of Parent Respondents

<u>Ethnicity</u>	<u>n</u>	<u>%</u>
White, non Hispanic	71	70.3
Black, non Hispanic	17	16.8
Hispanic	5	5.0
Asian or Pacific Islander	2	2.0
Native American	0	0.0
Other	1	1.0
Missing Data	5	5.0
Total	101	100

Table 5

Age of Participants as Reported by Parent Respondents

<u>Age</u>	<u>n</u>	<u>%</u>
12	29	28.7
13	40	39.6
14	26	25.7
Missing Data	6	5.9
Total	101	100

Table 6

Gender of Participants as Reported by Parent Respondents

Gender	n	%
Male	32	31.7
Female	63	62.4
Missing Data	6	5.9
Total	101	100

Families that participated in the study had an average of 4.49 family members currently living in the home. Besides supplying their ethnicity and the age and gender of their participating child, parent respondents also supplied other important demographic data. This data included: (a) age and gender of other children living in the household, (b) the parents' relationship to each child (i.e. birth parent, adoptive parent, step parent, foster parent, and legal guardian), (c) whether or not the respondent had ever been divorced, (d) current marital status, and (e) estimated annual family income. Of the responding parents, 32% reported having been divorced, while 68% have never been divorced. The rest of the parent demographic data is summarized in Tables 7-9.

Table 7

Relationship of Parent to Child Participating in Study

Relationship	n	%
Birth Parent	86	85.1
Adoptive Parent	3	3.0
Step Parent	1	1.0
Foster Parent	1	1.0
Legal Guardian	4	4.0
Missing Data	6	5.9
Total	101	100

Table 8

Marital Status of Parent Respondents

Marital Status	n	%
Single—never married	10	9.9
Separated	2	2.0
Divorced	10	9.9
Widowed	4	4.0
Unmarried—living with partner	5	5.0
Married	67	66.3
Missing Data	3	3.0
Total	101	100

Table 9

Estimated Annual Income of Responding Families

Income Ranges	n	%
Less than \$10,000	16	15.8
\$10,000-19,999	9	8.9
\$20,000-29,999	6	5.9
\$30,000-39,999	4	4.0
\$40,000-49,999	11	10.9
\$50,000-59,999	8	7.9
\$60,000-69,999	5	5.0
\$70,000-79,999	9	8.9
\$80,000-99,999	4	4.0
\$100,000-124,999	7	6.9
\$125,000-150,000	3	3.0
Over \$150,000	7	6.9
Missing Data	12	11.9
Total	101	100

Research Variables

The youth participants answered questions related to their family leisure activity patterns, their satisfaction with family life, and their physical activity. The youth's rating of their satisfaction with family life had a $M=27.7$ and a $SD=6$, which were consistent with youth ratings reported by Zabriskie and McCormick (2003). Their findings indicated a $M=24.8$ with a $SD=6.7$ for satisfaction with family life from the youth perspective.

Core family leisure patterns reported by the youth had a $M=37.7$ with a $SD=14.9$ with scores ranging from 6-82, while reported balance family leisure patterns had a $M=58.4$ with a $SD=33.1$ with scores ranging from 2-169. The total family leisure indices reported by the youth had a $M=96.17$ and a $SD=39.2$ with scores ranging from 10-232. These findings were also consistent with previous reports of youth leisure indices. Zabriskie and McCormick (2001) reported, “Core family leisure index scores from this sample ranged from 2 to 78, with a mean score of 27.2 ($SD=11.8$). Balance family leisure index scores ranged from 8 to 151, with a mean score of 58.8 ($SD=29.1$)” (p. 285).

The physical activity questions asked participants to account for: (a) how many days per week they participated in activities that made them sweat or breathe hard at intervals of 20 and 60 minutes, (b) how many days per week they participated in physical activity that did not make them sweat or breathe hard for at least 30 minutes, (c) how many hours of television they watch on an average school day, (d) how many hours they spend at the computer not doing homework on an average school day, and (e) how many sports teams they played on in the past 12 months. The results from the physical activity questions are summarized in Tables 10-15.

Table 10

Youth Frequencies: On how many of the past 7 days did you participate in physical activity for at least 20 minutes that made you sweat or breathe hard?

Days	n	%
0 days	13	12.9
1 days	6	5.9
2 days	14	13.9
3 days	14	13.9

(Table 10 continued)

(Table 10 continued)

Days	n	%
4 days	11	10.9
5 days	13	12.9
6 days	14	13.9
7 days	15	14.9
Missing Data	1	1
Total	101	100

Table 11

Youth Frequencies: On how many of the past 7 days did you participate in physical activity for at least 30 minutes that did not make you sweat or breathe hard?

Days	n	%
0 days	25	24.8
1 days	17	16.8
2 days	12	11.9
3 days	14	13.9
4 days	10	9.9
5 days	5	5.0
6 days	4	4.0
7 days	14	13.9
Total	101	100

Table 12

Youth Frequencies: During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?

Days	n	%
0 days	17	16.8
1 days	9	8.9
2 days	6	5.9
3 days	18	17.8
4 days	9	8.9
5 days	10	9.9
6 days	14	13.9
7 days	18	17.8
Total	101	100

Table 13

Youth Frequencies: On an average school day, how many hours do you watch TV?

Hours	n	%
Don't watch TV	4	4.0
<1 hour per day	15	14.9
1 hour per day	21	20.8
2 hours per day	28	27.7
3 hours per day	19	18.8
4 hours per day	5	5.0
5+ hour per day	8	7.9

(Table 13 continued)

(Table 13 continued)

Hours	n	%
Missing Data	1	1.0
Total	101	100

Table 14

Youth Frequencies: On an average school day, how many hours do you spend on the computer not doing school work?

Hours	n	%
None	22	21.8
<1 hour per day	25	24.8
1 hour per day	31	30.7
2 hours per day	12	11.9
3 hours per day	6	5.9
4 hours per day	2	2.0
5+ hour per day	3	3.0
Total	101	100

Table 15

During the past 12 months, on how many sports teams did you play (including school teams and community groups)?

Teams	n	%
0 teams	45	44.6
1 teams	25	24.8
2 teams	15	14.9
3+ teams	16	15.8
Total	101	100

Basic Relationship Data

Pearson-product moment correlations were utilized to examine the relationship between core, balance, and total family leisure indices and the youth's physical activity. In order to run the correlations, leisure indices for core, balance, and total family leisure patterns had to be calculated. Zabriskie and McCormick (2003) explained the method used to calculate leisure indices using the FLAP:

Scores for the FLAP are calculated by first multiplying the ordinal indicators of frequency and duration of participation in each category, and then summing the core categories to provide a core family leisure index and summing the balance categories to provide a balance family leisure index. The total family leisure involvement index is calculated by summing the Core and Balance indices. (p. 172)

One of the strongest significant relationships occurred between core and total family leisure indices and participants' daily physical activity for 30 minutes each time ($p < 0.01$, 2-tailed). Core, balance, and total leisure activity patterns also demonstrated statistically significant relationships with participants' daily physical activity at the 20, 30, and 60-minute intervals. Other significant correlations were found between total and

balance indices and the number of sports teams subjects reported participating in during the past year ($p < 0.05$, 2-tailed). While not statistically significant, some weak negative relationships appeared between balance and total family leisure indices and the amount of time participants spend in front of the television and computer each day. Correlation data between leisure indices and physical activity is summarized in the following table.

Table 16

Correlations Between Leisure Indices and Physical Activity

	1	2	3	4	5	6	7	8	9
1. PA - 20 minutes ⁺	--	.402**	.659**	.177	-.033	.385**	.246*	.210*	.269**
2. PA - 30 minutes ⁺⁺		--	.412**	.045	-.007	.146	.358**	.267**	.362**
3. PA - 60 minutes ⁺⁺⁺			--	.116	-.028	.304**	.142	.256*	.271**
4. # Hours/ TV				--	.165	.012	.142	-.091	-.023
5. # Hours/computer					--	.164	.014	-.093	-.073
6. # Sports Teams						--	.072	.223*	.216*
7. Core Leisure							--	.220*	.567*
8. Balance Leisure								--	.928**
9. Total Leisure									--

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

⁺On how many of the past 7 days did you exercise or participate in physical activity for at least 20 minutes that made you sweat or breathe hard?

⁺⁺On how many of the past 7 days did you participate in physical activity for at least 30 minutes that did not make you sweat or breathe hard?

⁺⁺⁺During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?

The relationship between the participants' satisfaction with family life and family leisure patterns were also examined. Individual SWFL responses had strong significant relationships with overall satisfaction with family life, which was to be expected ($p < 0.01$, 2-tailed). Significant relationships were found between core family leisure patterns and the youths' perception of family life being close to ideal ($p < 0.05$, 2-tailed) and also between balance and total leisure indices and ideal family life ($p < 0.01$, 2-tailed). Total family leisure patterns and the youths' perception of the conditions of their family life as

excellent also demonstrated a significant relationship ($p < 0.05$, 2-tailed). See Table 17 for summarized SWFL and family leisure relationships.

Table 17

Correlations Between Satisfaction with Family Life and Leisure Indices

	1	2	3	4	5	6	7	8	9
1. Family life close to ideal	--	.727**	.610**	.506**	.476**	.212*	.268**	.307**	.817**
2. Conditions of family life excellent		--	.715**	.636**	.479**	.181	.165	.208*	.876**
3. Satisfied with family life			--	.699**	.449**	.090	.152	.163	.842**
4. Gotten important things in family life				--	.385**	-.084	.129	.077	.785**
5. Would change almost nothing					--	.104	.098	.122	.738**
6. Core Leisure						--	.220*	.567**	.173
7. Balance Leisure							--	.928**	.206*
8. Total Leisure								--	.240*
9. Satisfaction with family life (overall)									--

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

Correlations were also analyzed between SWFL variables and physical activity questions. Significant relationships were discovered between participants who reported an ideal family life and who participated in daily physical activity at the 20 and 60-minute intervals ($p < 0.01$, 2-tailed). The relationship between ideal family life and the number of sports teams participated in was also significant at the $p < 0.01$ level. Also, subjects who stated they would change almost nothing about their family life demonstrated a significant relationship with the number of sports teams they had participated in during the past 12 months ($p < 0.01$, 2-tailed). See Table 18 for a summary of relationships between SWFL and physical activity.

Table 18

Correlations between Satisfaction with Family Life and Physical Activity

	1	2	3	4	5	6	7	8	9	10	11	12
1. Family life close to ideal	--	.727**	.610**	.506**	.476**	.232*	.134	.207*	-.060	-.170	.220*	.817**
2. Conditions of family life excellent		--	.715**	.636**	.479**	.048	.159	.126	-.103	-.124	.174	.876**
3. Satisfied with family life			--	.699**	.449**	.024	.174	.050	.058	.015	.170	.842**
4. Gotten important things in family life				--	.385**	-.089	.159	.074	-.092	.064	.063	.785**
5. Would change almost nothing					--	.108	.134	.101	.063	.101	.310**	.738**
6. PA - 20 minutes ⁺						--	.402**	.659*	.177	-.033	.385**	.097
7. PA - 30 minutes ⁺⁺							--	.412*	.045	-.007	.146	.185
8. PA - 60 minutes ⁺⁺⁺								--	.116	-.028	.304**	.137
9. # Hours/ TV									--	.165	.012	-.011
10. # Hours/computer										--	.164	-.003
11. # Sports Teams											--	.262*
12. Satisfaction with family life (overall)												--

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

⁺On how many of the past 7 days did you exercise or participate in physical activity for at least 20 minutes that made you sweat or breathe hard?⁺⁺On how many of the past 7 days did you participate in physical activity for at least 30 minutes that did not make you sweat or breathe hard?⁺⁺⁺During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?

Discussion of the Findings

The sample for this study was representative of the population. The majority of the respondents (n=71) reported their ethnicity as “White,” which represented the ethnic

majority of the population. The population was predominately male (51.7%) while the sample was predominately female at 62.4% as reported by parent respondents. Parents also provided the age of their child participating in the study, and most of the respondents were 13 years of age (n=40). Participants in the study primarily lived in homes with their birth parent (85.1%), the majority of whom reported their marital status as married (66.3%). Also, data indicated that 32% of parent respondents reported having been divorced. Annual family income reported by parent respondents resulted in a fairly even distribution (see Table 9).

The youth's rating of satisfaction with family life was comparable to youth ratings gathered in similar studies (Zabriskie, 2000). Also, the family leisure indices reported by youth subjects had comparable means and standard deviations to previously conducted research (Zabriskie, 2000; Zabriskie & McCormick, 2001). Findings indicated a fairly even distribution of responses among the physical activity questions (see Tables 10-15).

Several significant relationships between the research variables were revealed after data analysis. Core, balance, and total family leisure activity patterns each demonstrated a significant relationship with participants' daily physical activity at the 20 and 30-minute intervals. Balance and total family leisure indices were also significantly related to daily physical activity at the 60-minute interval and to the number of sports teams the subjects participated in during the past 12 months. The youths' overall SWFL rating also was significantly related to balance and total family leisure indices and to the number of sports teams the participants were part of during the past year. Also, significant relationships occurred between participants who reported an ideal family life and who participated in daily physical activity at the 20 and 60-minute intervals.

The findings from this study help describe the nature of the relationship between family leisure and physical activity. This research contributes to family leisure literature by further testing the FLAP instrument, offering an insight into family determinates of youth physical activity, and offering an avenue for future family leisure with previously unstudied variables such as physical activity and other health related issues.

Chapter 5

SUMMARY, FINDINGS, & RECOMMENDATIONS

Summary

The purpose of this study was to examine the relationship between family leisure activity patterns and physical activity in seventh and eighth grade students. Data were collected from a population (N=526) of seventh and eighth graders attending a Midwest junior high school. The survey instrument included the FLAP, SWFL, and physical activity questions from the Center for Disease Control and Prevention Youth Risk Behavior Survey. The collection period lasted nine school days during which time subjects were asked to take home survey packets and complete the minor assent document and youth FLAP. Parents of participants were asked to sign a consent document and complete a parent FLAP with relevant demographic questions. Data from the FLAP completed by the parents were not used for the purpose of this research; only demographic data supplied by the parents were analyzed.

Upon completion of data collection, the researcher picked up 117 packets from the school. Only 101 cases were deemed complete enough for descriptive statistics, while only 98 were appropriate for correlation data. Descriptive statistics were used to analyze demographic information describing the population and sample provided by participants' parents and the school. Descriptive statistics were computed for the following research variables: (a) core family leisure index, (b) balance family leisure index, (c) total family leisure index, (d) satisfaction with family life, and (e) physical activity.

Pearson product-moment correlations were used to examine the relationships between family leisure indices, satisfaction with family life, and physical activity.

Findings indicated low to moderate positive relationships between family leisure patterns and physical activity among the sample. Significant relationships were also found between satisfaction with family life and balance and total family leisure patterns. Satisfaction with family life also demonstrated significant relationships with aspects of youths' daily physical activity.

Findings

The following list of information was revealed through analysis of the data:

1. Core, balance, and total family leisure patterns were found to have positive relationships with participant daily physical activity at 20 and 30-minute intervals.
2. Balance and total family leisure patterns had significant positive relationships with participants' daily physical activity at 60-minute intervals and the number of sports teams participated in during the past year.
3. Negative relationships were discovered between subjects' reports of balance and total leisure activity patterns and the amount of time they spend at the computer or watching television on an average school day.
4. Subjects' perception of their family life as ideal demonstrated a significant relationship with all family leisure patterns.
5. Total family leisure had a significant positive relationship with subjects' perception of excellent family life conditions.
6. Ideal family life and participant reports of daily physical activity at the 20 and 60-minute intervals were significantly related.
7. The number of sports teams participated in and satisfactory family life demonstrated a statistically significant positive relationship.

Conclusions

The following conclusions were drawn from the findings:

1. Significant relationships between youth family leisure involvement at the core, balance, and total levels and physical activity were discovered.
2. Findings indicated low positive relationships between balance and total youth family leisure patterns and satisfaction with family life.
3. Satisfaction with family life was significantly related to participants' physical activity at the 20-minute interval and to the number of sports teams participated in during the past year.

Recommendations

Recommendations for Future Research

The following recommendations were made for further family leisure research:

1. The questions on the survey instrument related to physical activity were from the YRBS, which was developed by the Center for Disease Control and Prevention and is used to examine youth health risk behaviors. It is recommended future research examine other measures of youth physical activity that may be more appropriate for examining the relationship with the family leisure construct.
2. Further investigation into the domain of physical activity is recommended. For example, more research on the relationship between physical activity and BMI would enhance future research by providing justification to offer programs aimed at increasing physical activity.
3. While representative of the population, the sample was relatively small; therefore future research would be enhanced with larger sample sizes. Response rates could

possibly be increased with longer data collection periods.

4. Basic correlation data was used to examine the relationship between family leisure and physical activity. Further examination with more advanced statistical analysis would offer more insight into the relationship between the constructs of (a) core family leisure, (b) balance family leisure, (c) satisfaction with family life, and (d) physical activity.

5. Participants were not asked to report ethnicity, age, or gender on the survey instrument. The parents provided this information. It is recommended that questions regarding participants' ethnicity, age, and gender be added to the youth survey instrument for future research.

6. Further research should be aimed at better understanding the needs of families that may want to increase family leisure with both core and balance activities. Research would benefit from a reliable instrument to measure the leisure needs of the family. Such an instrument could be used in conjunction with the FLAP, which measures family leisure involvement.

Implications for Practice

The following recommendations were made for recreation and leisure service:

1. The significant relationship of family leisure patterns to family life satisfaction offer programmatic implications to practitioners. It is recommended recreation and leisure practitioners offer more programs focused on families in order to improve satisfaction with family life and strengthen the family unit as a whole.

2. Balance family leisure patterns were related to physical activity at the 20, 30, and 60-minute intervals. Balance leisure activities include community-based events, outdoor

activities, water-based activities, adventure activities, and tourism (Zabriskie & McCormick, 2003). Leisure service providers could possibly offer planned group outings for a flat family rate, such as a trip to a high ropes challenge course. This would encourage family participation in a balance activity and could encourage increased physical activity.

3. Findings indicated a relationship between core family leisure activities and physical activity in the sample. Yard activities, including yard work, are examples of core leisure activities (Zabriskie & McCormick, 2003). It is recommended parks and recreation professionals offer more community gardens or common areas where families can raise perennial or vegetable gardens together. This would provide families that may not own this type of area the opportunity to work together, increasing their physical activity and working toward keeping America's Five Promises.

4. A better assessment of the leisure needs of families is warranted in future research. Such an understanding would offer further programmatic implications to practitioners.

Conclusion

The obesity epidemic has become a prevalent societal issue and has even moved into the pop culture arena with shows like "Shaq's Big Challenge" on the ABC network and "Honey We're Killing the Kids" on The Learning Channel. Each television program focuses on obesity interventions for youth that include lifestyle changes focused on diet and physical activity. Physical activity is recognized as a method to decrease BMI in adolescents (Kimm et al, 2005; Berkey, Rockett, Gillman, & Colditz, 2003). This study was designed to understand the relationship between physical activity and family leisure among adolescents in order to figure

out a way to get America's youth more active and make programmatic implications for leisure service professionals. As the issue of obesity gains more attention, efforts to aid in its treatment will be mandated. Recreation and leisure service professionals should assess how they can get involved in these efforts through programming.

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APPENDIX A
HUMAN SUBJECTS APROVAL

Human Subjects Review Board
Office of Sponsored Programs
270-745-4652
FAX: 270-745-4211
sean.rubino@wku.edu



Western Kentucky University
1906 College Heights Blvd. #11026
Bowling Green, KY 42101-1026

The Spirit Makes the Master

In future correspondence please refer to HS07-098, December 5, 2006

Trinity Edwards
c/o Dr. Raymond Poff
PE & Rec
WKU

Dear Trinity:

Your revision to your research project, "Examining the Relationship between Family Leisure and Physical Activity among Seventh and Eighth Grade Students," was reviewed by the HSRB and it has been determined that risks to subjects are: (1) minimized and reasonable; and that (2) research procedures are consistent with a sound research design and do not expose the subjects to unnecessary risk. Reviewers determined that: (1) benefits to subjects are considered along with the importance of the topic and that outcomes are reasonable; (2) selection of subjects is equitable; and (3) the purposes of the research and the research setting is amenable to subjects' welfare and producing desired outcomes; that indications of coercion or prejudice are absent, and that participation is clearly voluntary.

1. In addition, the IRB found that you need to orient participants as follows: (1) signed informed consent and assent is required; (2) Provision is made for collecting, using and storing data in a manner that protects the safety and privacy of the subjects and the confidentiality of the data. (3) Appropriate safeguards are included to protect the rights and welfare of the subjects.

This project is therefore approved at the Full Board Review Level pending the submission of the approval letter from the Bowling Green School District until November 1, 2007.

2. Please note that the institution is not responsible for any actions regarding this protocol before approval. If you expand the project at a later date to use other instruments please re-apply. Copies of your request for human subjects review, your application, and this approval, are maintained in the Office of Sponsored Programs at the above address. Please report any changes to this approved protocol to this office. Also, please use the stamped Informed Consent documents that are included with this letter. A Continuing Review protocol will be sent to you in the future to determine the status of the project.

Sincerely,

Sean Rubino, M.P.A.
Compliance Manager
Office of Sponsored Programs
Western Kentucky University

cc: HS file number Edwards HS07-098

APPENDIX B
PARENTAL INFORMED CONSENT

Parental Informed Consent

You and your child have been asked to complete a survey entitled: *Family Leisure Activity Profile*. Please take a moment to review this form. By signing this form, you give consent for you and your child to participate in this study. There are two copies of the survey in this packet. Yours is attached to this form, and your child's survey is attached to the **Minor Assent Form**. Please complete the demographic questions at the end of your survey. This information is for the researcher's use and will not affect your child's ability to participate. Your child must also sign the **Minor Assent Form** before participation can begin. **Please place completed forms and surveys in the envelope provided, seal the envelope and sign your name over the seal. This helps protect your privacy. Please send the completed packet with your child to _____ Junior High by Friday, March 9th. They will be collected by your child's homeroom teacher and picked up by the researcher.**

The purpose for conducting this study is to better understand the relationship between family leisure and physical activity among seventh and eighth graders. The demographic information will be used for data analysis and will be kept **strictly confidential**. The intent of the parent survey is to gain insight on parent perspectives on family leisure. Your child's survey includes 6 questions regarding **their own** physical activity. These questions are not included in the parent survey as they are not critical to the study.

Your child's participation in this research will not only benefit the researcher, but will also benefit the school system in understanding student wellness.

You understand that your participation is **voluntary**, that all **information is confidential**, and your identity and the identity of your child will not be revealed. You and your child are free to withdraw consent and to discontinue participation **before submitting the survey**. Any questions you or your child may have about the project will be answered by the researcher named below or by the Human Protections Administrator for WKU.

Western Kentucky University and the investigator named below have responsibility for ensuring that participants in research projects conducted under institutional auspices are safeguarded from injury or harm resulting from such participation. If appropriate, the person named below may be contacted for remedy or assistance for any possible consequences from such activities.

On the basis of the above statements, you and your child agree to participate in this project by completing the survey.

Parent/Legal Guardian Signature

Researcher: Trinity Edwards

APPENDIX C
MINOR ASSENT

Minor Assent Form

I, _____, understand that my parents have given permission for me to take part in a project about Family Leisure and Physical Activity under the direction of Trinity Edwards.

I am taking part because I want to. I have been told that I can stop any time before completing the survey and nothing will happen to me if I want to stop.

Signature _____ Date _____

APPENDIX D

VITA

Trinity Edwards

trinity.edwards@wku.edu

Education

M. S. Recreation and Sport Administration, Western Kentucky University, August 2007, GPA 3.9

B. S. Recreation Administration, Western Kentucky University, 2005, GPA 3.9

Professional Experience

January 2007-Present

Advisor and Academic Center for Excellence Coordinator
College of Health and Human Services, WKU, Bowling Green, KY

- Provide advising services for students and training for faculty advisors in the College of Health and Human Services.
- Coordinate the Academic Center for Excellence, which houses a 28-station computer lab, professional poster plotter, and color printer. ACE also offers free tutoring and several recruiting and retention events throughout the academic year.
- Develop relationships with campus services and offer programs geared toward student success including graduate school workshops, student recognition events, GRE review sessions, major's fairs, and resume review sessions.

August 2005-December 2006

Graduate Assistant
Recreation and Sport Administration, WKU, Bowling Green, KY

- Monitored the computers and periodicals in the student resource room.
- Assisted professors with classes.
- Assisted professors with specific research projects and manuscripts.
- Attended recruiting events such as Focus on Western and the CHHS Major's Fair.

May 2006-August 2006

Camp Supervisor, Intern
Camp Big Red, WKU, Bowling Green, KY

- Edited the Camp Big Red Newsletter for each session.
- Assisted in coordinating special events for campers, like the Big Red 500.
- Created the Camp Big Red 2006 Parent Survey.

- | | |
|-----------------------------------|---|
| September 2005-March 2006 | Volunteer
Athletic Marketing, WKU Athletics, Bowling Green, KY <ul style="list-style-type: none"> • Created flyers for special promotions. • Assisted with the coordination of promotions. • Assisted in carrying out promotions at each home game. |
| June-September 2005
(seasonal) | Park Guide
Mammoth Cave National Park, Mammoth Cave, KY <ul style="list-style-type: none"> • Lead cave tours. • Conducted interpretive trail walks for park visitors. • Provided visitor services and information. |
| September 2004-
June 2005 | Intern
City County Planning Commission <ul style="list-style-type: none"> • Created new filing system for zone changes. • Researched Kentucky guidelines for comprehensive plans. • Aided in updating the Comprehensive Plan through land-use studies. |
| May-September 2004 | Intern
Greenways Commission, Bowling Green, KY <ul style="list-style-type: none"> • Updated the Bowling Green's 30 year-old bike plan, which is now being implemented. • Evaluated river access points for a Blueways program. • Created a database used to make a map of suggested bicycle routes. |

Scholarships & Awards

- Regents Scholarship, 2001-05, Western Kentucky University
- Dr. Alton Little Scholarship, 2004-05, Recreation Administration
- Kentucky Recreation and Park Society Alton Little Scholarship, 2004-05, KRPS
- Outstanding Female Undergraduate Award, 2005, Recreation Administration
- Outstanding Female Graduate Recreation Senior, 2007, Recreation and Sport Administration

Certifications & Workshops

- Wilderness First Responder Certification (WFR), March 2004-2007
- Kentucky Department of Fish and Wildlife Resources Hunter Education Instructor, September 2004
- KDFWR Hunter Education Workshops, September 2004 and 2005 (instructed)

Professional Organizations

Kentucky Recreation and Park Society, 2003-Present

Student Section Chair, KRPS Board, 2003-2005

National Recreation and Park Association, 2004-2005

Association of Outdoor Recreation and Education, 2004-2005

Scholarly Activities

Publications

Edwards, T. J. (2004). Professional organizations in the field of recreation and leisure services: What are they, and which one is right for you? *Kentucky Recreation and Parks*, 54(2), 17-18.

Yang, H., Poff, R., Bain, S., **Edwards, T.**, Gibson, F., & Harris, M. (2007). An analysis of challenges facing future recreation and leisure professionals. (Accepted to *Kentucky Association for Health, Physical Education, Recreation and Dance Journal*).

Poff, R., Yang, H., **Edwards, T.**, Bain, S., Harris, M., & Gibson, F. (2007). Advice for aspiring recreation professionals. *Kentucky Recreation and Parks*, 57(1), 13-15.

Presentations

Siewers, H. T., & **Edwards, T. J.** (2004, November 15). Bikeways plan for Bowling Green. *Kentucky Recreation and Park Society Conference*, Paducah, KY.

Gibson, F. G., Stenger-Ramsey, T. L., **Edwards, T. J.**, Loyd, J., Hendren, D. (2006, November 14). Internships: What I learned and what I would change. *Kentucky Recreation and Park Society Conference*, Bowling Green, KY

Other Volunteer/Professional Activities

Mentor/volunteer

Big Brothers/Big Sisters Program, Bowling Green, KY—January 2006-Present.

Hilltopper Black Bag Bass Classic, April 8, 2006

- Involved with coordination and execution of charity fishing tournament.
- Head of Media Relations Committee. Responsibilities included writing a press release, sending it to media outlets, securing television spots on local news, developing a Crisis Management Plan, and coordinating a promotional video shoot the day of the event.
- Raised \$450 in cash donations and approximately \$60 in in-kind donations for the Sponsorship Committee.